

### **REMARKS**

The Office Action dated February 17, 2004 has been received and carefully studied.

The Examiner newly rejects claims 1-7, 9-15 and 31-34 under 35 U.S.C. §103(a) as being unpatentable over WO 98/37949. The Examiner states that the '949 application teaches a cast in place polymer matrix containing sorbent particles in pipet tips or multiwell plates having the claimed aspect ratio, and that the matrix adheres to the housing.

By the accompanying amendment, claims 1, 9, 17, 31, 33 and 34 have been amended to recite that the structure is coterminous with the first and second surfaces of the housing. Support for the amendment can be found in the paragraph bridging pages 11 and 12 of the specification, and in the first full paragraph on page 12. The '949 publication does not disclose or suggest a structure coterminous at both ends of a housing.

The Examiner rejects claims 8 and 16-24 under 35 U.S.C. §103(a) as being unpatentable over WO and further in view of Fernwood. The Examiner admits that the '949 reference does not teach a collection reservoir, or matrix height less than or equal to the thickness, but considers that it would have been obvious to provide collection reservoirs in order to collect filtrate from sample wells and underdrains as taught by Fernwood, and that it would have been obvious to fill the underdrain portion of WO containing the matrix in order to form a filtration device with filter matrix filling the filter matrix of the housing.

By the accompanying amendment, claims 8 and 16 have been cancelled, and claim 17 has been amended to recite that the structure is coterminous with both sides of the housing.

The Examiner's position is based upon the disclosure in Fernwood of an embodiment where the membrane can be a nonporous film or sheet containing porous circular regions. The Examiner interprets the nonporous portions of this sheet as the instant housing or substrate, and the porous circular regions as the instant porous structure. However, what teaching is present to motivate one skilled in the art to fill the underdrain portion of WO with matrix? The structure analogous to the WO wells in Fernwood is the Fernwood wells 12, and these wells are certainly not filled with matrix material. The skilled artisan would have to ignore the remainder of the Fernwood disclosure regarding the placement of the nonporous sheet, focus only on the nonporous sheet itself, and somehow arrive at the conclusion that the WO underdrain wells should be filled with matrix. As stated by the Federal Circuit in *In re Fine*, 5 U.S.P.Q.2d 1596 (Fed. Cir. 1986), "One cannot use hindsight reconstruction to pick and choose from isolated disclosures in the prior art to deprecate the claimed invention." Of similar import is *In re Wesslau*, 147 U.S.P.Q. 391, 393 (CCPA 1965):

"It is impermissible within the framework of section 103 to pick and choose from any one reference only so much of it as will support a given position to the exclusion of other parts necessary to the full appreciation of what such reference fairly suggests to one skilled in the art." (Emphasis added).

See also, *Bausch & Lomb, Inc. v. Barnes-Hind/Hydrocurve, Inc.*, 230 U.S.P.Q. 416 (Fed. Cir. 1986):

"A single line in a prior art reference should not be taken out of context and relied upon with the benefit of hindsight to show obviousness".

In addition, in further support of the present invention, submitted herewith is a

Declaration of Dr. William Kopaciewicz, one of the inventors of the present invention. In the Kopaciewicz Declaration, the embodiment of Fernwood relied upon by the Examiner was carried out using several different nonporous sheets. A matrix consistent with the WO reference was cast into circular regions of the nonporous sheets to create the porous regions. However, no suitable membrane could be formed, as there was insufficient surface tension to hold the lacquer within the circular regions in order to form the porous structure. The Kopaciewicz Declaration demonstrates that even if the skilled artisan were somehow motivated to combine the teachings of WO and Fernwood, they would fail in such an endeavor.

The Examiner also rejects claims 1-20, 22-24, 31-34 under 35 U.S.C. §103(a) as being unpatentable over Fernwood in view of WO 98/37949, and claim 21 as being unpatentable over Fernwood in view of WO 98/37949, and further in view of Bowers. The Examiner now admits that Fernwood does not teach the claimed aspect ratio or adhesion, but cites the '949 reference as disclosing these features.

The rejections are respectfully traversed.

As discussed above and as demonstrated by the Kopaciewicz Declaration, the skilled artisan would not be motivated to use the method of WO to cast polymeric matrices as the filter portions of the non-porous sheet of Fernwood. Even were such motivation present, the skilled artisan would not succeed.

Reconsideration and allowance are respectfully requested in view of the foregoing.

Respectfully submitted,

  
Kevin S. Lemack

Reg. No. 32,579

176 E. Main Street - Suite 7

Westboro, Massachusetts 01581

TEL: (508) 898-1818



**THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Applicant : William Kopaciewicz, et al.  
Serial No. : 09/659,241  
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For : HIGH DENSITY CAST-IN-PLACE SAMPLE PREPARATION  
CARD  
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Art Unit : 1743  
Attorney :  
Docket No. : MCA-463

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Kevin S. Lemack  
Name of applicant, assignee, or Registered  
Representative

[Signature]  
Signature  
May 17, 2004  
Date

**DECLARATION UNDER 37 C.F.R. §1.132**

I, William Kopaciewicz, hereby declare:

That I have been since 1997 and am now Research and Development  
Director of Life Science Product Development, for Millipore Corporation; that  
from 1986-1996, I was Research and Development Manager of Chromatography  
Product Development for Amicon, Inc., a division of W.R. Grace & Co.-Conn.;

That I am a graduate of Rider College, from which I hold a B.A. degree in biology, and am a graduate of Purdue University, from which I hold a PhD degree in biochemistry;

That I am a named inventor on six issued United States patents in the field of chemistry and biochemistry;

That I have reviewed the above-referenced patent application as well as the Office Action dated February 17, 2004, and I am familiar with its prosecution and the cited references, and have conducted the following tests in an effort to produce a membrane sheet having non-porous regions and circular porous regions containing cast polymeric matrices as the filter portions:

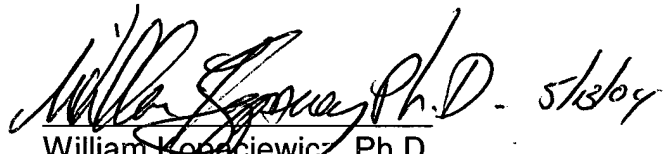
1. Non porous strips of 0.005 inch thick polyethylene (back) and 0.009 inch PVC (front) containing 0.25 inch holes were taped to a glass plate. Into the holes, a liberal amount of membrane lacquer (see WO98/37949) consisting of 25% w/w C<sub>18</sub> spherical silica in an 8% w/w solution of polysulfone (Udel P3500) in N-methyl-pyrrolidone having a viscosity of about 1000 cps was applied to the holes of the polyethylene and PVC strips. See Figures 1 and 2. The lacquer was "smoothed" into the holes of the polyethylene strip with the edge of a plastic box (Figure 3), and was similarly smoothed into the holes of the PVC strip (Figure 4). The polyethylene strip was carefully removed from the glass plate (Figure 5). The PVC strip was then carefully removed from the glass plate (Figure 6).

2. The lacquer was not retained in the holes of the polyethylene strip and remains on the glass plate, as shown in Figure 7.

3. The lacquer was also not retained in the holes of the PVC strip and remains on the glass plate, as shown in Figure 8.

4. These tests demonstrate that the non-porous sheet of Fernwood cannot retain the lacquer in porous regions, and that as a result, the method of the WO reference cited cannot be used to form the porous filter regions.

5. I further declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

  
William Kopaciewicz, Ph.D.  
R&D Director, Life Science Product  
Development  
Millipore Corporation